

CLAIMS

What is claimed is:

1. A method comprising:
 - recognizing that a primary device with a storage location has been placed in a power saving mode; and
 - switching file access control of the primary device's storage location from the primary device to an audio device after the primary device has been placed in a power saving mode.
2. The method of claim 1 further comprising, the primary device sending a signal to the audio device to alert the audio device that the primary device has been placed in a power saving mode.
3. The method of claim 1 further comprising, switching control of the primary device's storage location and the primary device's CODEC to the audio device upon a user request, while the primary device is not in a power saving mode.
4. A method as in claim 1, wherein the audio device is installed within the primary device.
5. A method as in claim 1, wherein the audio device is external to the primary device.

6. A method as in claim 5, wherein the audio device is coupled to the primary device through a USB connection.

7. A method as in claim 1, wherein the primary device comprises a laptop computer.

8. A method as in claim 1, wherein the CODEC is a combination of hardware and software that converts analog sound, speech and/or video to digital code (analog to digital) and also converts digital code to analog sound, speech and/or video (digital to analog).

9. A method as in claim 1, wherein the CODEC is hardware that converts analog sound, speech and/or video to digital code (analog to digital) and also converts digital code to analog sound, speech and/or video (digital to analog).

10. A method as in claim 1, wherein the CODEC is software that converts analog sound, speech and/or video to digital code (analog to digital) and also converts digital code to analog sound, speech and/or video (digital to analog).

11. A method comprising:
searching a storage location for a digital signal processor (DSP) boot program;

providing the DSP with the boot program;
searching for updates to the DSP boot program; and
providing the DSP with the updates for the DSP boot program.

12. A method as in claim 11 further comprising searching a storage location for a DSP boot program with a micro-controller.
13. A method as in claim 11 further comprising searching for updates to the DSP boot program with a micro-controller.
14. A method as in claim 11 further comprising searching a ROM for the DSP boot program.
15. A method as in claim 11 further comprising searching an SRAM for the DSP boot program.
16. A method as in claim 11 further comprising searching an SRAM for updates to the DSP boot program.
17. A method as in claim 11 further comprising searching an external ROM for updates to the DSP boot program.

18. A method of processing an audio file located on a primary device's storage location comprising:

- accepting a user request at a keypad;
- converting the user request to an entry code;
- transmitting the entry code to an audio device;
- determining the function of the entry code at the audio device; and
- processing the audio file on the primary device's storage location

according to the function determined at the audio device.

19. The method of claim 18 wherein processing the audio file on the primary device's storage location according to the function determined at the audio device comprises:

- accepting a user request to play an audio file from a storage location, where the storage location is attached to the primary device;
- transmitting the user request to play an audio file to a micro-controller;
- determining the format, name, and location of the audio file for which the play request has been made;
- transmitting the format, name, and location of the audio file to a DSP; and
- notifying the DSP that it is time to start playing the audio file.

20. The method of claim 18 wherein processing the audio file on the primary device's storage location according to the function determined at the audio device comprises:

accepting a user request to record sound to a storage location, where the storage location is attached to the primary device;

transmitting the user request to record sound to a micro-controller;

accepting sound into a microphone;

receiving sound accepted into the microphone into a CODEC;

converting the sound from an analog stream at the CODEC to a digital stream;

transmitting the digital stream from the CODEC to a digital interface;

receiving the digital stream from the digital interface into a DSP;

performing noise cancellation if necessary;

compressing the digital stream if necessary; and

writing the digital stream to a storage location.

21. The method of claim 18 wherein processing the audio file on the primary device's storage location according to the function determined at the audio device comprises:

transferring control of voice input to a primary device's microphone from a primary device to an audio device;

accepting sound into the microphone while an audio file controlled by an audio device is playing from a storage location;

amplifying the voice input at the microphone; and

outputting the voice after it has been amplified through a speaker at the same time the audio file being played is having its sound output through the speaker.

22. A method as in claim **18** further comprising comparing the entry code against a table of functions related to keypad entries when determining the function related to a keypad entry code.
23. A method as in claim **18** wherein the entry code comprises an entry in a table of entry codes, the table of entry codes further including corresponding functions associated with each entry code.
24. A method as in claim **18** wherein the audio file has a CD audio format.
25. A method as in claim **18** wherein the audio file has an MP3 format.
26. A method as in claim **18** wherein the audio file has a WAV format.
27. A method as in claim **18** wherein the audio file has an AAC format.
28. An apparatus comprising:
a micro-controller;

an input device coupled to the micro-controller, to receive user entries to control a primary device's audio device when the primary device is in a power saving state;

an interface to the micro-controller, the interface to provide the micro-controller with access to a storage location, wherein the storage location is coupled to the primary device;

a gateway coupled to the micro-controller;

a DSP coupled to the gateway, the DSP to read user requested files, decode user requested files, and write to user files; and

an output port coupled to the DSP, the output port to transmit a decoded audio stream out of the DSP and receive a digital signal into the DSP.

29. The apparatus of claim **28** wherein the interface is an IDE interface.

30. The apparatus of claim **28** wherein the storage location is a hard drive.

31. The apparatus of claim **28** wherein the storage location is a CD-RW drive.

32. The apparatus of claim **28** wherein the storage location is a flash memory.

33. The apparatus of claim **32** wherein the flash memory is a SmartMedia.

34. The apparatus of claim **28** wherein the primary device is a notebook computer.

35. The apparatus of claim **28** wherein the primary device is an audio jukebox.

36. An apparatus as in claim **28** further comprising a USB interface coupled to the micro-controller.

37. An apparatus as in claim **28** further comprising an I2C master port coupled to the micro-controller.

38. An apparatus as in claim **28** further comprising an I2C slave port coupled to the micro-controller.

39. An apparatus as in claim **28** further comprising a read only memory (ROM) coupled to the micro-controller.

40. An apparatus as in claim **28** further comprising an SRAM coupled to the micro-controller.

41. An apparatus as in claim **28** further comprising an SD flash controller coupled to the micro-controller.

42. The apparatus of claim **28** wherein the micro-controller includes an 8051 micro-controller.

43. An apparatus as in claim **28** further comprising a SmartMedia interface coupled to the micro-controller.

44. An apparatus as in claim **43** wherein the SmartMedia interface is further coupled to the DSP.

45. An apparatus as in claim **28** further comprising an AC link interface coupled to the DSP.

46. An apparatus as in claim **28** further comprising an I2S port coupled to the DSP.

47. An apparatus as in claim **28** wherein the apparatus is a single device.

48. An apparatus as in claim **28** wherein the apparatus is part of a single device.

49. An apparatus as in claim **28** further comprising a device which is external to the primary device.

50. An apparatus as in claim **28** further comprising a device which is internal to the primary device.

51. The apparatus of claim 28 wherein an interface coupled to the micro-controller comprises a plurality of interfaces.

52. The apparatus of claim 28 wherein a storage location comprises a plurality of storage locations.